

## STATEMENT OF BASIS

for draft Louisiana Pollutant Discharge Elimination System permit No. LA0119997  
to discharge to waters of the State of Louisiana.  
AI No.: 125131 / Activity No.: PER20090001

THE APPLICANT IS: Vermilion Parish Waterworks District No. 1  
11822 LA Highway 699  
Maurice, LA 70555

THE FACILITY IS: Intracoastal City/Esther/Forked Island Area Water Treatment Plant  
Kuehling Drive  
Esther, Vermilion Parish

ISSUING OFFICE: Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services  
Post Office Box 4313  
Baton Rouge, Louisiana 70821-4313

PREPARED BY: Bonnie Wascom

DATE PREPARED: September 16, 2009

1. PERMIT STATUS

- A. LPDES permit – LA0119997  
LPDES permit effective date: March 1, 2005  
LPDES permit expiration date: February 28, 2010
- B. LWDPS permit – NA  
LWDPS permit effective date: NA  
LWDPS permit expiration date: NA
- C. Date Application Received: August 5, 2009

2. FACILITY INFORMATION

- A. FACILITY TYPE/ACTIVITY – potable water treatment plant

The Intracoastal City/Esther/Forked Island Area Water Treatment Plant is an existing water treatment facility in Esther, Vermilion Parish. Source water is from ground water wells. First, the raw water is injected with chlorine and potassium permanganate. The water is then sent through the manganese greensand pressure filters and then to the zeolite softeners. After the softeners, the water is injected with chlorine again and is stored in ground storage tanks.

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The filters are backwashed with treated water every other day and the softeners are regenerated with a brine solution based on flow meter control approximately 4 times a week. All backwash and regeneration wastewater flows into a baffled concrete dilution tank prior to being discharged.

The sanitary wastewater from the facility is treated by a package water treatment plant that is introduced downstream of the discharge from the dilution tank. The discharge from the package water treatment plant is estimated at 100 GPD.

B. FEE RATE

1. Fee Rating Facility Type: minor
2. Complexity Type: I
3. Wastewater Type: III
4. SIC codes: 4941

- C. LOCATION - Kuehling Drive, south of Highway 82 and Highway 333 intersection  
 Esther, Vermilion Parish  
 Latitude +29° 50' 35", Longitude -92° 10' 28"

3. OUTFALL INFORMATION

**RLP 1 Outfall 001**

**Discharge Type:** Filter Backwash and Softener Regeneration Wastewater

**Treatment:** Dilution/Settling

**Location:** at the point of discharge from the dilution tank prior to mixing with other waters

**Flow:** 0.037 MGD

**Discharge Route:** by pipe to the Kuehling Drive roadside ditch, thence to the Highway 333 roadside ditch, thence to Meaux Canal

**RLP 2 Outfall 002**

**Discharge Type:** Treated Sanitary Wastewater

**Treatment:** Package Water Treatment Plant

**Location:** at the point of discharge from the package water treatment plant prior to mixing with other waters

**Flow:** 100 GPD

**Discharge Route:** by pipe to the Kuehling Drive roadside ditch, thence to the Highway 333 roadside ditch, thence to Meaux Canal

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4. RECEIVING WATERS

STREAM – Outfall 001 and 002– by pipe to the Kuehling Drive roadside ditch, thence to the Highway 333 roadside ditch, thence to Meaux Canal, thence to the Vermilion River

HARMONIC MEAN – 1 cfs (see attached August 26, 2009, Memorandum from Todd Franklin to Bonnie Wascom)

BASIN AND SEGMENT – Vermilion-Teche River – Subsegment 060802

DESIGNATED USES -

- a. Primary contact recreation
- b. Secondary contact recreation
- c. Propagation of fish and wildlife
- d. Agriculture

5. EXISTING EFFLUENT LIMITS

1. Outfall 001 – Filter Backwash and Softener Regeneration Wastewater

<u>Pollutant</u>	<u>Limitation</u> Mo. Avg.: Daily Max.	<u>Monitoring</u>
Flow	----: Report (GPD)	Monthly
TSS	30: 45 mg/L	Monthly
Total Recoverable Iron	----: Report	Quarterly
Chlorides	2,970: 7,050 mg/L	Quarterly
pH	6.0 - 9.0 s.u.	Monthly
Clarifying Agents Used	----: Report	Monthly

2. Outfall 002 – Treated Sanitary Wastewater

<u>Pollutant</u>	<u>Limitation</u> Mo. Avg.: Weekly Avg.	<u>Monitoring</u>
Flow (GPD)	----: Report	Semiannually
BOD <sub>5</sub>	----: 45 mg/L	Semiannually
TSS	----: 45 mg/L	Semiannually
Fecal Coliform	----: 400 colonies/100 mL	Semiannually
pH	6.0 - 9.0 s.u.	Semiannually

6. PROPOSED EFFLUENT LIMITS

BASIS – See rationale below.

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7. COMPLIANCE HISTORY/COMMENTS

A. Compliance History

There are no open, appealed, or pending OES enforcement actions as of September 16, 2009. There is no EPA enforcement history on file as of September 16, 2009.

An inspection conducted on October 16, 2008 noted no areas of concern.

B. DMR Review/Excursions

A DMR review was performed for the period of June 2007 – June 2009. For Outfall 001, 25 DMRs were reviewed with excursion for the chlorides parameter reported. For Outfall 002, 5 DMRs were reviewed with no reported excursions.

Reported Exceedances				
Outfall	Date	Parameter	Monthly Average Limit	Reported
001	August -October 2008	Chlorides	2,970 mg/L	3,370 mg/L

8. ENDANGERED SPECIES

The receiving waterbodies and proposed discharge are not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated November 17, 2008 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

9. 303 (d) LISTED WATERBODIES

Subsegment 060802, Vermilion River - From LA-3073 bridge to ICWW, is not listed on LDEQ's Final 2006 303(d) list as impaired. However, subsegment 060802 was previously listed as impaired for phosphorus, nitrogen, organic enrichment/low DO, pathogen indicators, suspended solids/ turbidity/ siltation, and Carbofuran, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading

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provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for Segment 060802:

Carbofuran

The TMDL for *Carbofuran in the Mermentau and Vermilion Teche River Basins* was final on March 21, 2002. No allocation was given to point source discharges in the Vermilion - Teche River Basin. According to the TMDL, there is only one point source in the Vermilion - Teche (FMC Corp. LA0064360) but it does not discharge Carbofuran. In addition, this facility has no potential to discharge Carbofuran. Therefore, requirements for Carbofuran will not be placed in this permit.

Suspended solids/turbidity/siltation

As per the *TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin*, point source loads are so small as to be insignificant, and because effective policies are in place to limit TSS discharges, no specific reductions from point sources are required. Standard TSS limitations are included in this permit.

Pathogen Indicators

Per *The Vermilion River Fecal Coliform TMDL*, there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL. The pathogen indicators impairment shall be addressed through the standard fecal coliform limitations in this permit.

Organic Enrichment/Low DO

Per the EPA's *Vermilion River Dissolved Oxygen and Nitrogen TMDL*, the limits apply to sanitary discharges, and process outfalls of food processors and seafood processors. For discharges less than 25,000 GPD, secondary limits shall apply as per the TMDL. The organic enrichment/low DO impairment shall be addressed through the BOD<sub>5</sub> parameter for Outfall 002.

Nitrogen

The *TMDL for Dissolved Oxygen and Nutrients in the Vermilion River* was final on April 5, 2001. No allocation was given to point source discharges in the Vermilion - Teche River Basin. LDEQ's position regarding water quality criteria for nutrients, is that when oxygen-demanding substances are controlled and limited in order to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited. See *In The Matter of Sierra Club and Louisiana Environmental Network Request for Nutrient Limits*. Docket No. AHD-DR-96001. LDEQ April 29, 1996. LAC 33:IX.2707.D.1.f.iii allows the establishment of effluent limitations based on an indicator parameter for the pollutant of concern. LDEQ's consistent approach to controlling nutrients where the WQMP does not otherwise require specific nutrient limitations is achieved by limiting the discharge of oxygen-demanding substances through the BOD<sub>5</sub> limitations. Compliance with the BOD<sub>5</sub> limitations as the indicator parameters will result in the control of nutrients from the discharge sufficient to attain and maintain the applicable water

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quality standard. Effluent monitoring of the indicator parameter as conducted by the permittee in accordance with effluent limitations of the permit in addition to LDEQs ambient water quality monitoring program will allow for further evaluation by the Department to determine the effectiveness of the limitation. The reopener clause located in Other Conditions of the permit allows the Department to modify or revoke and reissue the permit if the limitations as set on the indicator parameter are shown to no longer attain and maintain applicable water quality standards.

Phosphorus

As per the February 29, 2000 Delist (Federal Register Notice: Vol. 65, Num. 173, pages 54032-54034, 9/6/2000), assessment of new data and information shows this segment is meeting water quality standards for Phosphorus. Therefore, requirements for total phosphorus were not included in this permit.

10. HISTORIC SITES

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

11. TENTATIVE DETERMINATION

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in the application.

12. PUBLIC NOTICES

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation  
Office of Environmental Services Public Notice Mailing List

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Rationale for Intracoastal City/Esther/Forked Island Area Water Treatment Plant

1. RLP 1 Outfall 001 – Filter Backwash and Softener Regeneration Wastewater

<u>Pollutant</u>	<u>Limitation*</u> Mo. Avg.: Daily Max.	<u>Reference</u>
Flow (MGD)	---: Report	LAC 33:IX.2361.I.1.b
TSS	30: 45 mg/L	Potable Water Treatment Plant General Permit
Chlorides	2,970: 7,050 mg/L	Previous Permit
Clarifying Agents Used	Report: Report	Potable Water Treatment Plant General Permit
Total Recoverable Iron	---: Report mg/L	Potable Water Treatment Plant General Permit
pH	6.0 (min.) - 9.0 (max.) s.u.	Potable Water Treatment Plant General Permit

**Treatment:** Dilution/Settling

**Monitoring Frequency:** A performance based reduction in monitoring frequency has been granted for several parameters. Once per month for Flow and once per three months for Chlorides, Total Recoverable Iron, TSS, and pH at the point of discharge from the dilution tank prior to mixing with other waters. Clarifying Agents Used: document quarterly in an inventory record the quantity and type of any clarifying agent used.

2. RLP 2 Outfall 002 – Treated Sanitary Wastewater

<u>Pollutant</u>	<u>Limitation*</u> Mo. Avg.: Daily Max.	<u>Reference</u>
Flow (MGD)	----: Report	LAC 33:IX.2361.I.1.b
TSS	----: 45 mg/L	Class I Sanitary General Permit
BOD <sub>5</sub>	----: 45 mg/L	Class I Sanitary General Permit
Fecal Coliform	----: 400 Colonies/100 mL	Class I Sanitary General Permit
pH	6.0 (min.) - 9.0 (max.) s.u.	Class I Sanitary General Permit

**Treatment:** Package Wastewater Treatment Plant

**Monitoring Frequency:** Once per six months for all parameters at the point of discharge from the package wastewater treatment plant prior to mixing with other waters.

**\*Limits Justification:** For all parameters except Chlorides, limits and monitoring frequencies are based on the Potable Water Treatment Plant General Permit (LAG380000) and the Class I Sanitary General Permit (LAG530000). A water quality screen (attached) was performed to calculate the water quality based limit for chlorides. Technologically established limits achieved in the previous permit are continued per anti-backsliding requirements.

**Note:** The Potable Water Treatment Plant General Permit is not appropriate for this facility because the facility treats the raw water by means of a zeolite ion exchange in the softening process. The zeolite is recharged using a sodium chloride solution that produces a high chloride

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concentration in the wastewater. Therefore, a facility specific permit is required to determine the appropriate water quality based permit limit for discharges of chlorides.

BPJ Best Professional Judgment  
BAT Best Available Technology Economically Achievable  
GPD Gallons per Day  
MGD Million Gallons per Day  
s.u. Standard Units

**NOTE:** For outfalls containing concentration limits, the usage of concentration limits is based on BPJ for similar outfalls since the flow is variable and estimated.

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#### Storm Water Pollution Prevention Plan (SWP3) Requirement

Discharges from this facility are not classified as industrial storm water per LAC 33:IX.2341.B.14. Therefore, the Storm Water Pollution Prevention Plan (SWP3) requirement is not included in this permit.

However, per LAC 33:IX.903.B, all above ground storage tanks with a capacity of 660 gallons for an individual container or 1320 for multiple containers, must have secondary containment and a Spill Prevention and Control Plan.

#### Monitoring Frequency

Please be aware that the Department has the authority to reduce monitoring frequencies when a permittee demonstrates two or more consecutive years of permit compliance. Monitoring frequencies established in LPDES permits are based on a number of factors, including but not limited to, the size of the discharge, the type of wastewater being discharged, the specific operations at the facility, past compliance history, similar facilities and best professional judgment of the reviewer. We encourage and invite each permittee to institute positive measures to ensure continued compliance with the LPDES permit, thereby qualifying for reduced monitoring frequencies upon permit reissuance. If the Department can be of any assistance in this area, please do not hesitate to contact us. As a reminder, the Department will also consider an increase in monitoring frequency upon permit reissuance when the permittee demonstrates continued non-compliance.